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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,257	09/11/2003	Takaaki Abe	50195-384	3549

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McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

ONEILL, KARIE AMBER

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/659,257

Applicant(s)

ABE ET AL.

Examiner

Karie O'Neill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11-13-06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Applicant's arguments filed on January 12, 2007, were received. Claims 1-14 are pending this office action. Claims 1 and 2 are withdrawn from consideration, pursuant to a restriction requirement.

2. Applicant's arguments, see pages 2-9, filed November 20, 2006, with respect to the rejection(s) of claim(s) 3-14 under U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).

Claim Rejections - 35 USC § 102/103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 3-12 and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kodama et al. (JP 2000-277093).

With regard to Claims 3-5 and 14, Kodama et al. disclose a battery element (20) internally sealed in a laminate sheet (10) provided with a thermally welded resin layer (12a, 12b) and a metallic layer (11) laminated thereon (paragraph 0015 and 0035), comprising: an electric power generating element called an electrode object (20); and a tab or electrode terminal (21a, 22a) formed with a thermally welded resin layer (12a, 12b) which is thermally welded with a thermally welding resin layer of a laminate sheet (10) wherein the tab and thermally welding resin layer are welded by permitting a thermally welding area, which is formed in at least one of the thermally welding resin layer and the tab, and connected to the electric power generating element (20) (paragraph 0035) with an amount of resin allowing an amount of resin, to be pushed outside the tab, to be compensated. This can be seen in Drawings 6(A) and 6(B) where the amount of resin (12a) on either side of the laminate sheet (10) and surrounding the electrode tabs (22a, 21a) is thermally welded between the laminate sheet (10) and is compensated to fill the entire space without excess resin being pushed outside the tab. Kodama et al. do not specifically teach the resin is provided in an amount that compensates the resin to be pushed outside the tab. However, it is the position of the examiner such feature is inherent, given that the laminated tabs after thermal welding treatment are fully encapsulated and there is no indication of excessive resin in the resulting laminate. A reference, which is silent about a claimed invention's features, is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. Inherency is not established by probabilities or possibilities. In re Robertson, 49 USPQ2d

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1949 (1999). Alternatively, it would have been within the skill of the ordinary artisan to adjust the thickness of the thermally welding resin layer disclosed in Kodama et al., in order to compensate for the differing thicknesses of the negative and positive electrode tabs because it is the object of the invention to contact the tab of the thicker thickness to the sheathing object and fill in the remainder of space with the resin layer to prevent external moisture from permeating the interior of the cell or have the electrolytic solution in the interior of the cell leak out (paragraph 0037-0039).

With regard to Claim 4, Kodama et al. disclose wherein a thickness of the thermally welding resin layer is determined to be a value equal to or greater than one half of the thickness of the tab. Drawing 6 shows the resin layer being thicker in the middle section than the tab thickness. It is also disclosed in paragraph 0045 that the thickness of the negative electrode terminal (tab) is 50-100 micrometers and the thickness of the positive electrode terminal is 100 micrometers and the thickness of the resin layer is 50 micrometers.

With regard to Claim 6, Kodama et al. disclose wherein the thermally welding area is composed of thermally welding resin and integrally formed with the thermally welding resin layer such that the thermally welding area corresponds to a partial area, to which the tab is welded, of a portion to be thermally welded, of the thermally welding resin layer. Kodama et al. disclose in Drawing 2(A) the thermally welding resin area is the area in which the resin layer (12a) makes contact with the electrode tab (21a, 22a).

With regard to Claims 7 and 10, Kodama et al. disclose a thickness of the thermally welding area of the thermally welding resin layer is determined to be larger than a thickness of a remaining area of the portion to be thermally welded by a value equal to

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or greater than one half of the thickness of the tab. The thickness of the negative electrode tab is between 50-100 micrometers and the thickness of the positive electrode tab is 100 micrometers (paragraph 0045), therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to make the thermally welding resin layer of the thermally welding area of the negative electrode tab equal to or thicker than the resin layer of the remaining area of the portion of the laminate structure and positive electrode tab to be thermally welded in order to fill the spaces on the laminate structure in order to prevent external moisture from permeating the interior of the cell or have the electrolytic solution in the interior of the cell leak out (paragraph 0037-0039).

With regard to Claims 8 and 11, Kodama et al. disclose a thickness of the thermally welding area of the thermally welding resin layer is determined to be larger than a thickness of a remaining area of the portion to be thermally welded by a value equal to or less than one half of the thickness of the tab. The thickness of the negative electrode tab is between 50-100 micrometers and the thickness of the positive electrode tab is 100 micrometers (paragraph 0045), therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to make the thermally welding resin layer of the thermally welding area of the positive electrode tab equal to or thinner than the resin layer of the remaining area of the portion of the laminate structure and negative electrode tab to be thermally welded in order to fill the spaces on the laminate structure in order to prevent external moisture from permeating the interior of the cell or have the electrolytic solution in the interior of the cell leak out (paragraph 0037-0039).

With regard to Claim 9, Kodama et al. disclose wherein a thickness of the thermally welding area is determined to be equal to or larger than one half of the

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thickness of the tab. Paragraph 0045 discloses that the thickness of the negative electrode terminal (tab) is 50-100 micrometers and the thickness of the positive electrode terminal is 100 micrometers and the thickness of the resin layer is 50 micrometers, making the thickness of the thermally welding area equal to or greater than the thickness of the tab.

With regard to Claim 12, Kodama et al. disclose wherein the tab includes a negative electrode tab composed of nickel and a positive electrode tab composed of aluminum (paragraph 0036) and wherein, x represent the cross sectional area of the negative electrode tab and y represents the cross sectional area of the positive electrode tab, x and y satisfy the following formula: $1 < x/y \leq 2.6$, because Kodama et al. disclose x being 100 micrometers and y being 100 micrometers satisfying the formula $1 < x/y$.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama et al. (JP 2000-277093), as applied to Claims 1-12 and 14 above, and in further view of Takahashi et al. (US 2001/0038938 A1).

7. Kodama et al. disclose the laminate battery in paragraph 5 above, but do not disclose wherein the laminate battery is installed on a vehicle as a battery module.

Takahashi et al. discloses in paragraph 0002, various forms of batteries being used in a wide variety of applications, mainly automotive. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to use the laminate battery of Kodama et al. in automotive applications, because Takahashi et al. teach these batteries being very good for power storage.

Response to Arguments

8. *Applicant's principal arguments are:*

(a) Groups I and II are clearly not related as intermediate-final product

In response to Applicant's arguments, please consider the following comments:

(a) Examiner stands by original characterization of Groups I and II being intermediate-final product because the intermediate product is deemed to be useful as a packaging laminate sheet for holding a variety of items other than just a battery element and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

Conclusion

9. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on November 13, 2006, prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DAI-WEIYUAN
PRIMARY EXAMINER

Karie O'Neill
Examiner
Art Unit 1745

KAO